

**REMARKS**

The amendments and remarks herein attend to all outstanding issues in the non-final Office Action of December 17, 2003. Claims 1, 2, 4-13 and 15-19 remain pending in this application. Claims 1, 4 and 16 have been amended, with claims 4 and 16 amended to correct dependency, as necessitated by the cancellation of claim 3.

**I. Claim Rejections under 35 U.S.C. §103 over Calamia in view of Hoffman and Burrows**

Claims 1, 3-4, 6, 8-9 and 11-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,999,936 issued to Calamia et al. (hereinafter, "Calamia") in further view of U.S. Patent No. 5,533,289 issued to Hoffman (hereinafter, "Hoffman") and U.S. Patent No. 5,856,031 issued to Burrows (hereinafter, "Burrows"). Applicants respectfully disagree and traverse the rejection.

Three basic criteria must be met by the Examiner to establish a *prima facie* case of obviousness:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP, §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 3 has been cancelled and its subject matter incorporated into independent base claim 1. The Examiner has stated with regard to claim 3 that "Hoffman discloses (fig 1) **the connector (44) includes a key pin (the end of electrode 28)** for aligning the connector with the interconnect tab portion (26) in order to electrically couple the lamp with the power supply." (Page 3, final paragraph of the pending Action, emphasis added). We respectfully disagree that Hoffman discloses any key pin, but also point out that connector (44) does not include the end of electrode (28). Electrode (28) is shown as part of terminal tab (26). Hoffman, therefore, does not disclose "**a connector including a key pin** for aligning the connector with the interconnect tab portion" as recited in Applicants' amended claim 1.

The Examiner has conceded that "Calamia and Burrows...fail to clearly point out a key pin." (Page 3, penultimate paragraph of the pending Action). As discussed above, Hoffman fails to disclose "a connector including a key pin for aligning the connector with the interconnect tab portion". Thus the combination of Calamia, Burrows and Hoffman does not disclose every element found in amended claim 1 and is insufficient to support a *prima facie* case of obviousness.

Claim 6 distinguishes from the combination of Calamia, Hoffman and Burrows because, among other reasons, the sealing layer disclosed by Burrows is on the outside of the electroluminescent lamp such that it "encapsulates electroluminescent lamp **10** on substrate **17**." (col. 11, lines 6-7; Figs. 2, 4, and 6). Burrows' sealing layer is applied to the outside of the lamp "to seal the layers therein" (col. 11, line 9). Applicants' sealing layer is configured between the front outlining electrode and the dielectric layer because "this minimized crossover design having an additional sealant layer 177 that seals any pinholes and channels in the dielectric layer significantly reduces failures of the lamp." (p. 8, lines 22-24). Applicants' claim 6 recites, "an outlining electrode formed onto the sealing layer". Burrows' sealing layer is the outermost layer of the lamp and the formation of an outlining electrode onto the sealing layer is thus precluded.

In short, both independent claims in the present application contain elements not disclosed by Calamia, Hoffman and/or Burrows. Claims 1 and 6, along with all claims depending therefrom, should thus be allowable.

Claim 4 has been amended to depend from independent claim 1. Claim 9 depends from independent claim 6. As discussed above, the combination of Calamia, Burrows and Hoffman fails to render claims 1 or 6 *prima facie* obvious. It necessarily follows that claims 4 and 9 are not *prima facie* obvious. Additionally, the connector (54) of Calamia is not equivalent to Applicants' connector (200). Specifically, Calamia's connector does not include a key pin for aligning the connector with the interconnect tab portion. Burrows and Hoffman also fail to identify a connector including a key pin.

Claim 11 depends from independent claim 6 and benefits from arguments made above. Claim 12 recites "at least one of said first electrode and said outlining electrode is comprised of *silver particles*." Burrows teaches that "both bus bar **11** and contact **19** are very thin strips of *copper*" (col. 6, lines 47-48) and "that the doping agent in rear electrode **16** may be any electrically conductive material including, but not limited to, *gold, zinc, graphite and copper*, or combinations thereof." (col. 8, lines

16-19). Calamia discloses that "...the entire upper surface of the substrate **14** is coated with a conductive film **16**, such as *aluminum or copper*..." (col. 3, lines 44-46), but never mentions an appropriate material for electrodes **40**, **42**. Likewise, Hoffman fails to disclose any material for use in the manufacture of his electrodes.

Claim 13 recites, "said sealing layer comprises a barrier to prevent silver migration between said first electrode and said outlining electrode." As noted, however, the sealing layer of Burrows is not equivalent to Applicants' sealing layer. discussed above. Burrows' sealing layer or "cover **12** encapsulates electroluminescent lamp **10** on substrate **17**." (col. 11, lines 6-7; Figs. 2, 4, and 6). It is applied to the outside of the lamp "to seal the layers therein" (col. 11, line 9). It is not disposed between the first and outlining electrodes and cannot provide "a barrier to prevent silver migration between said first electrode and said outlining electrode" as required by claim 13.

Claims 1, 2, 4, 6, 8-9 and 11-13 are in condition for allowance. Applicants respectfully solicit that result.

**II. Claim Rejections under 35 U.S.C. §103 over Calamia in view of Hoffman and Nicholson**

Claims 2, 5, 7, 10 and 15-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Calamia in further view of Hoffman and U.S. Patent No. 6,414,650 to Nicholson et al. (hereinafter, "Nicholson"). Applicants respectfully disagree and traverse the rejection.

The Examiner states that Calamia and Hoffman disclose all of the limitations of claims 2, 5, 7, 10 and 18-19 but fail to clearly point out 1) a locking pin, 2) a key positioned between the contacts, 3) one or more locking holes, and 4) an interconnected tab portion defined by a pair of spaced, parallel slots (See pages 5 and 6, paragraphs 2-5). Applicants respectfully disagree. Calamia and Hoffman fail to disclose, for example, a dielectric layer, an outlining electrode formed onto a sealing layer, and a connector that includes a key pin. Nor does Nicholson disclose these elements.

Applicants' claim 2 requires "**a connector includes a locking pin** for locking said connector to said surface of said sign." The Examiner fails to identify a connector in Nicholson, but labels screws 582 as locking pins. However, item 576 containing screws 582 may not be considered a connector because the Examiner has labeled it as a key. Items 520 and 522 are referred to as "left and right connector

portions" (col. 20, lines 15-16), but if one considers items 520 and 522 as connectors then the connector does not include a locking pin 576.

Likewise, claims 5 and 10 require **"a connector including a key** positioned between said contacts for said first electrode and said second electrode such that said connector is mountable to said interconnect tab portion in a proper alignment." Item 576 was identified by the Examiner as a key. But in the absence of an identified connector which includes a key and a locking pin, Nicholson (in combination with Calamia and Hoffman) cannot render obvious claims 2, 5, 7 and 10. Applicants further note that claims 2 and 5, and 7 and 10 depend from allowable base claims 1 and 6, respectively, and thus benefit from like arguments.

Claim 15 depends from claim 2 and benefits from the arguments made above. Claim 16 requires that an **"interconnect tab portion has a key slot** on the male end for receiving the key pin." The Examiner previously identified Nicholson key 576 and key slot (Fig. 42 where item 576 enters sign 516). Additionally, although not clearly identified, the Examiner appears to view item 544 shown in Fig. 43 as the interconnect tab portion. However, item 544 does not contain a key slot where item 576 may be entered.

Claim 17 recites that an "interconnect tab portion is defined by a pair of spaced, parallel slots extending inward from the sign perimeter to define a male end, and said connector is configured to extend into said slots for releasably mating with said interconnect tab portion." Clearly, however, item 516 of Fig. 42 is the sign and the only slot extending inward from the sign is that which has been identified as a key slot. Additionally, no male end is defined in Nicholson's Figs. 41-43 and a connector has not been identified.

Claims 18 and 19 depend from independent base claims 1 and 6. As noted, these independent claims are in condition for allowance.

Given the amendments and arguments laid out herein, Applicants respectfully request withdrawal of the rejection under 35 USC 103 and allowance of claims 2, 5, 7, 10 and 15-19.

### **III. Conclusion**

The present paper is a complete response to the non-final Office Action of December 17, 2003. This application is in condition for allowance, and Applicants respectfully solicit that result.

A Petition for a one-month Extension of Time, along with authorization to charge the required fee of \$55 to Deposit Account 12-0600. This Response is

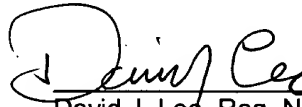
considered timely filed, as the Petition serves to extend the period for response up to and including April 19, 2004, because the due date for this Response with a one-month Extension of Time fell on a Saturday (April 17, 2004). Per 37 CFR §1.7, *"When the day, or the last day fixed by statute or by or under this part for taking any action or paying any fee in the United States Patent and Trademark Office falls on Saturday, Sunday, or on a Federal holiday within the District of Columbia, the action may be taken, or the fee paid, on the next succeeding business day which is not a Saturday, Sunday, or a Federal holiday."*

It is believed that no additional fees are due, however, if any such fees are deemed necessary in connection with this response, the undersigned requests that they be applied to Deposit Account 12-0600. Should the Examiner have any questions, comments or suggestions that would expedite the prosecution of this case, Applicants' undersigned representative earnestly requests a telephone conference.

Respectfully Submitted,

Date:

4/19/04



David J. Lee, Reg. No. 41,935  
LATHROP & GAGE, L.C.  
4845 Pearl East Circle, Suite 300  
Boulder, Colorado 80301  
Tel: (720) 931-3021  
Fax: (720) 931-3001